W. P. A. Seals Abandoned Coal Mines in War Against Ohio Stream Pollution

As a result of a survey in 1933, it was learned that the neglected openings of unused mines in Ohio and bordering states were daily pouring 12,000,000 pounds of sulfuric acid into the Ohio River. This acid causes untold expense in fish and crop loss, in the corroding of dams and steel boats, and in the extra costs of water purification. Virtually every stream in Ohio's coal area has been polluted to some extent by this sulfuric acid. In southeastern Ohio, where the government is developing large areas into national parks for the benefit of the hunter and the fisherman, stream polution was a vexing problem.

Sulfuric acid is formed in deserted mines by the interaction of surface drainings and oxygen with the pyrites in the coal. The newly formed sulfuric acid then drains into some neighboring stream.

The WPA work consisted of sealing all mine openings to shut off the oxygen supply. Since 1933, more than 1000 WPA workers have been sealing mine openings in 24 Ohio counties. About 90% of the openings are closed up entirely. The remaining 10% are "water-sealed" by the construction of a brick and concrete trap which operates on the same principle as the trap in a kitchen sink. The WPA crews risked life and limb in clambering over deserted workings since many had hidden openings which were hundreds of feet deep. Old mines are fine breeding places for rattlesnakes and copperheads. Because of this, each crew carried snake bite serum as standard equipment. There are about 4500 abandoned coal mines in Ohio, and each mine may have from three to 300 openings. When it is known that each opening is painstakingly hunted down and carefully sealed, one realizes the enormity of this job. The project is ideal from a WPA standpoint, since 98% of the money can be used for wages—only 2% is needed for materials.

To date, 27,531 openings in 1425 old mines have been sealed. The acid in Ohio streams has been reduced 55%. As a result, the copper color of various streams has cleared as the water becomes more alkaline, fish have been coming back into the streams, and farmers have been able to water their crops.

Uncle Sam has spent $1,024,000 on this project to date. It is estimated by engineers that this expenditure is less than the price of repairing acid-damaged federal locks and dams in one year.